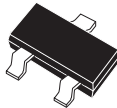


CMPT8099 NPN
CMPT8599 PNP

COMPLEMENTARY
SILICON TRANSISTOR



SOT-23 CASE

CentralTM
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMPT8099, CMPT8599 types are Complementary Silicon Transistors manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for general purpose audio amplifier applications.

Marking Codes are CKB and C2W
Respectively.

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

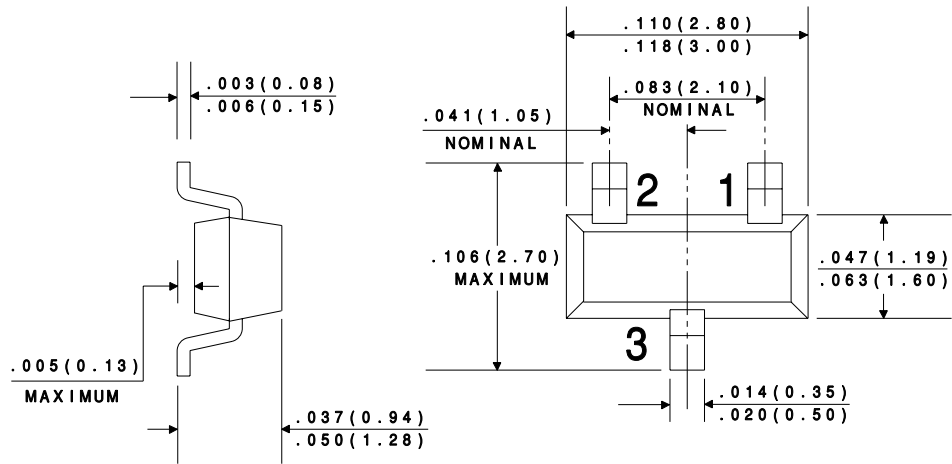
| | SYMBOL | CMPT8099 | CMPT8599 | UNITS |
|---------------------------|----------------|-------------|----------|-----------------------------|
| Collector-Base Voltage | V_{CB0} | 80 | 80 | V |
| Collector-Emitter Voltage | V_{CEO} | 80 | 80 | V |
| Emitter-Base Voltage | V_{EBO} | 6.0 | 5.0 | V |
| Collector Current | I_C | 500 | | mA |
| Power Dissipation | P_D | 350 | | mW |
| Operating and Storage | | | | |
| Junction Temperature | T_J, T_{stg} | -65 to +150 | | $^{\circ}\text{C}$ |
| Thermal Resistance | θ_{JA} | 357 | | $^{\circ}\text{C}/\text{W}$ |

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

| SYMBOL | TEST CONDITIONS | CMPT8099 | | CMPT8599 | | UNITS |
|---------------|--|----------|-----|----------|-----|-------|
| | | MIN | MAX | MIN | MAX | |
| I_{CBO} | $V_{CB}=80\text{V}$ | | 0.1 | | 0.1 | mA |
| I_{EBO} | $V_{BE}=6.0\text{V}$ | | 0.1 | | - | mA |
| I_{EBO} | $V_{BE}=4.0\text{V}$ | | - | | 0.1 | mA |
| BV_{CBO} | $I_C=100\text{mA}$ | 80 | | 80 | | V |
| BV_{CEO} | $I_C=10\text{mA}$ | 80 | | 80 | | V |
| BV_{EBO} | $I_E=10\text{mA}$ | 6.0 | | 5.0 | | V |
| $V_{CE(SAT)}$ | $I_C=100\text{mA}, I_B=5.0\text{mA}$ | | 0.4 | | 0.4 | V |
| $V_{CE(SAT)}$ | $I_C=100\text{mA}, I_B=10\text{mA}$ | | 0.3 | | 0.3 | V |
| $V_{BE(ON)}$ | $V_{CE}=5.0\text{V}, I_C=10\text{mA}$ | 0.6 | 0.8 | 0.6 | 0.8 | V |
| h_{FE} | $V_{CE}=5.0\text{V}, I_C=1.0\text{mA}$ | 100 | 300 | 100 | 300 | |
| h_{FE} | $V_{CE}=5.0\text{V}, I_C=10\text{mA}$ | 100 | | 100 | | |

| SYMBOL | TEST CONDITIONS | CMPT8099 | | CMPT8599 | | UNITS |
|----------|-----------------------------------|----------|-----|----------|-----|-------|
| | | MIN | MAX | MIN | MAX | |
| h_{FE} | $V_{CE}=5.0V, I_C=100mA$ | 75 | | 75 | | |
| f_T | $V_{CE}=5.0V, I_C=10mA, f=100MHz$ | 150 | | 150 | | MHz |
| C_{ob} | $V_{CB}=10V, I_E=0, f=1.0MHz$ | | 6.0 | | 4.5 | pF |
| C_{ib} | $V_{BE}=0.5V, I_C=0, f=1.0MHz$ | | 25 | | 30 | pF |

All dimensions in inches (mm).



LEAD CODE:

- 1) BASE
- 2) EMITTER
- 3) COLLECTOR